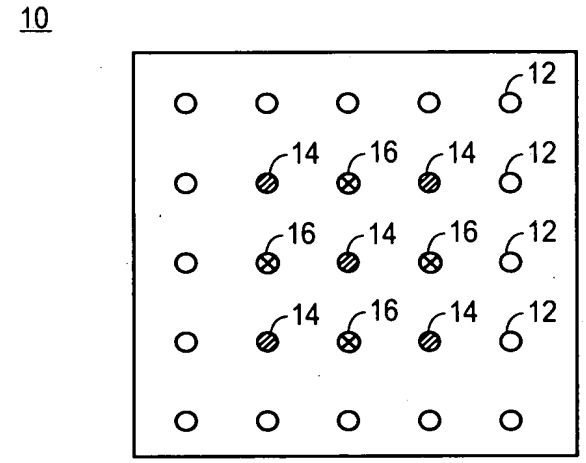

FIG. 1A
(PRIOR ART)

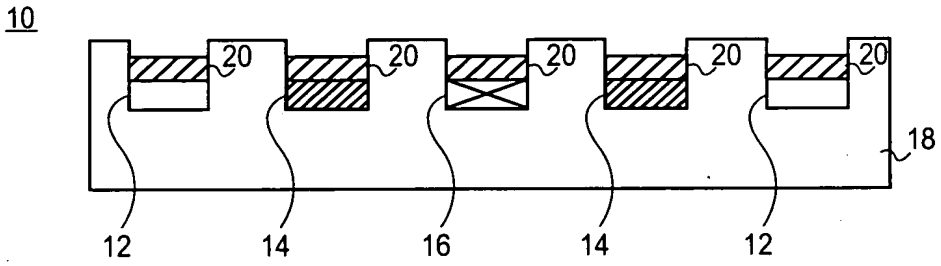

FIG. 1B
(PRIOR ART)

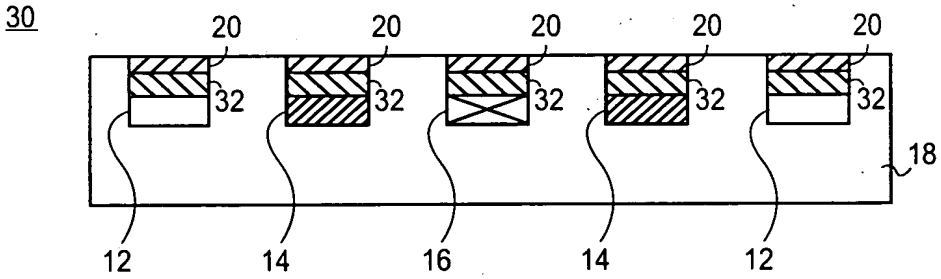

FIG. 1C
(PRIOR ART)

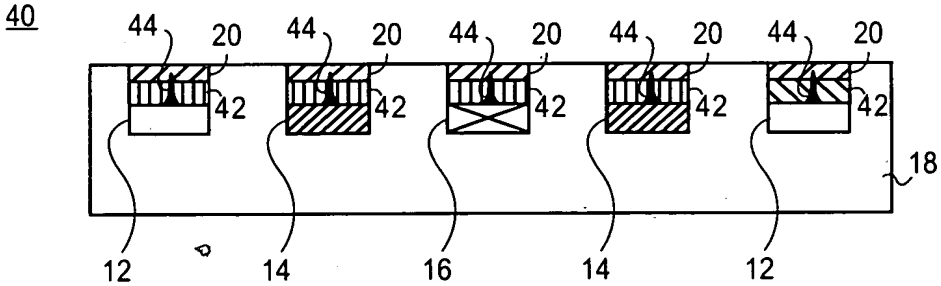

FIG. 1D
(PRIOR ART)

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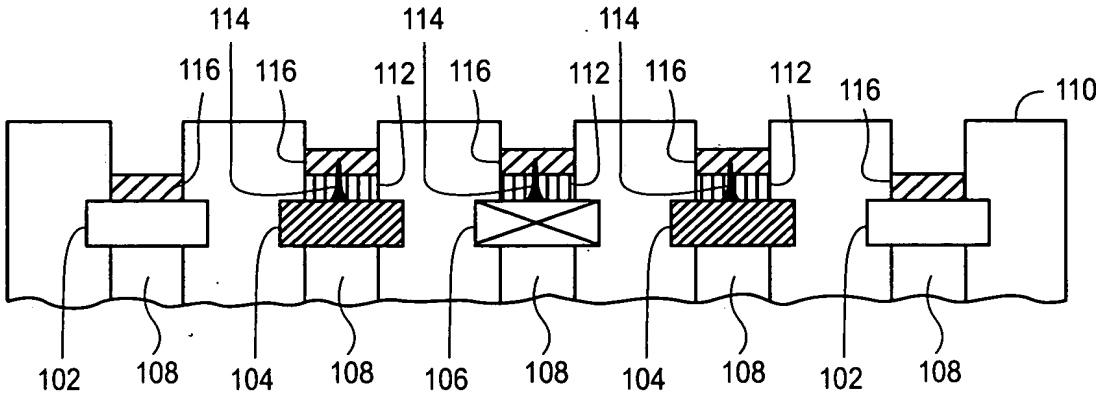

FIG. 2A

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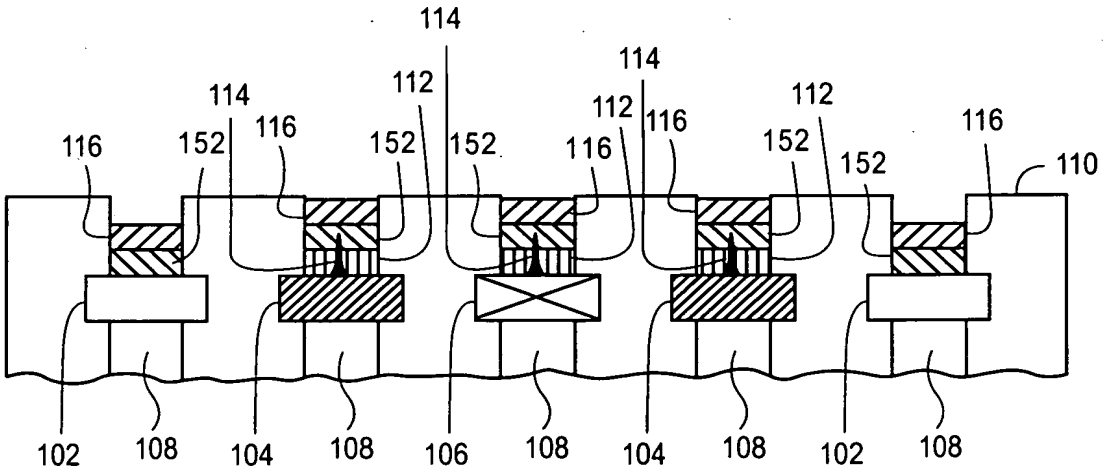
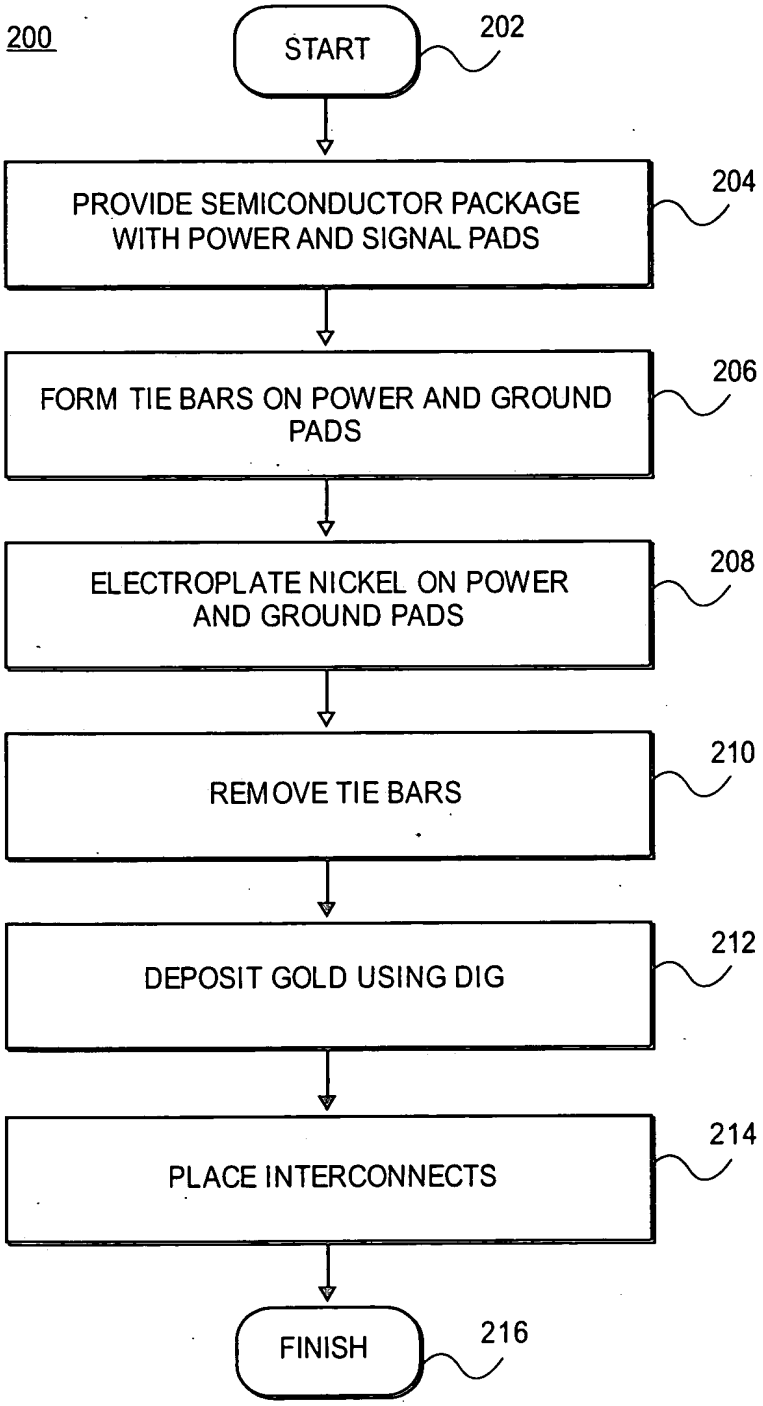


FIG. 2B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START
202
PROVIDE SEMICONDUCTOR PACKAGE WITH POWER AND SIGNAL PADS
204
FORM TIE BARS ON POWER AND GROUND PADS
206
ELECTROPLATE NICKEL ON POWER AND GROUND PADS
208
REMOVE TIE BARS
210
DEPOSIT GOLD USING DIG
212
PLACE INTERCONNECTS
214
FINISH
216

FIG. 3

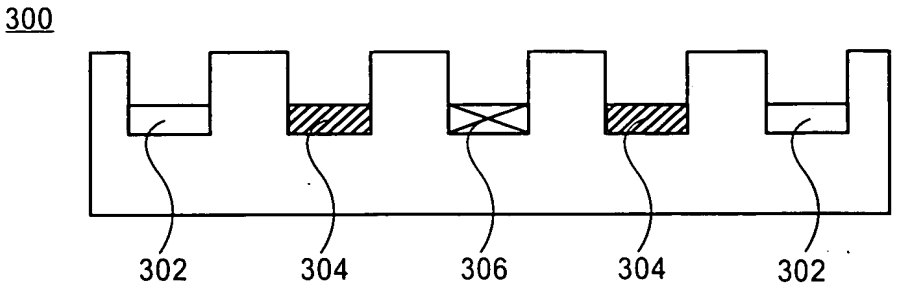

FIG. 4A

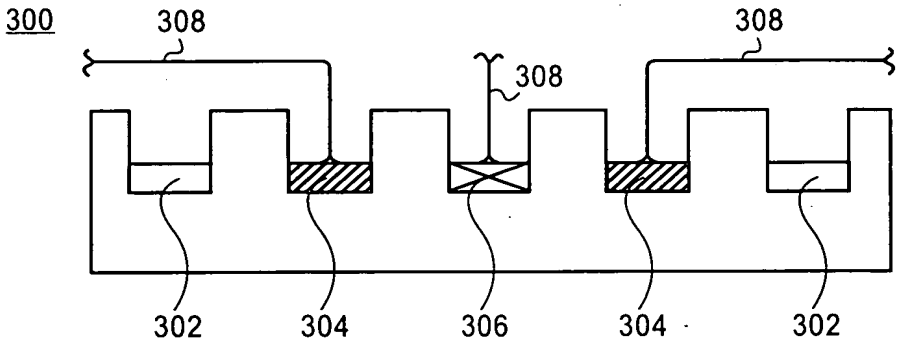

FIG. 4B

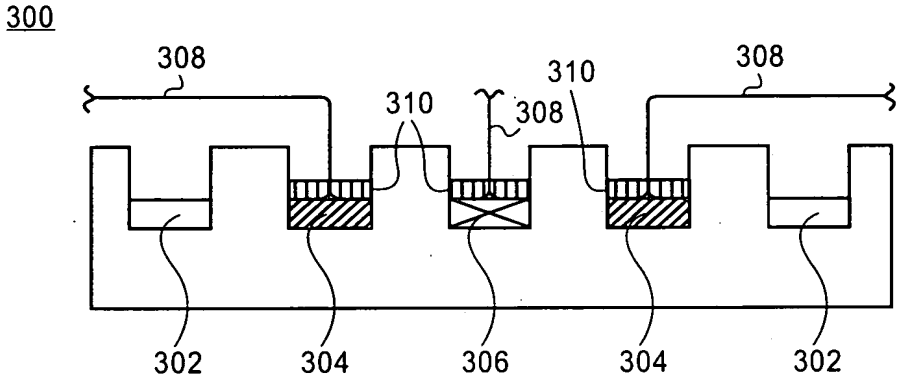

FIG. 4C

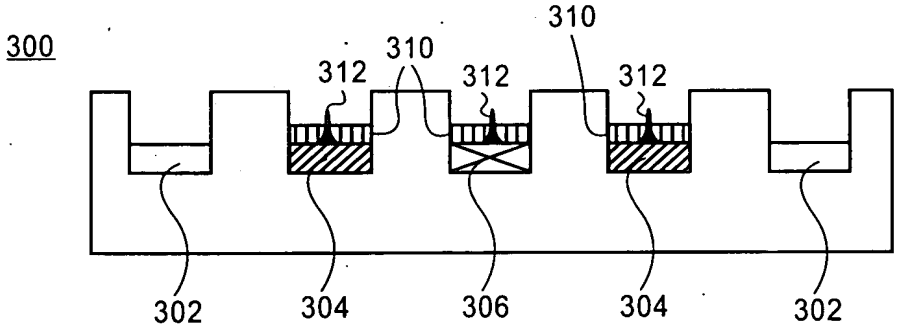

FIG. 4D

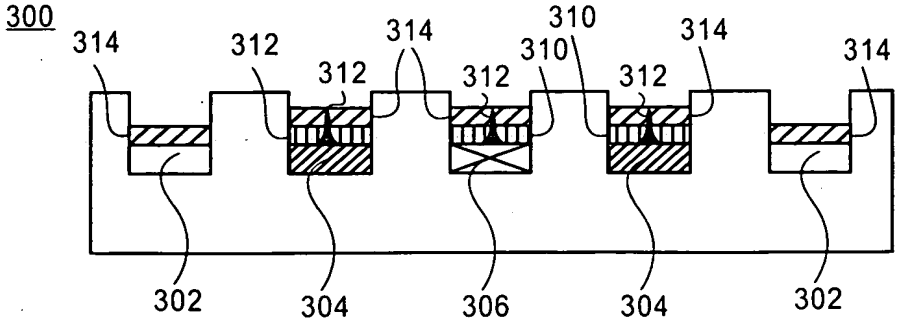

FIG. 4E

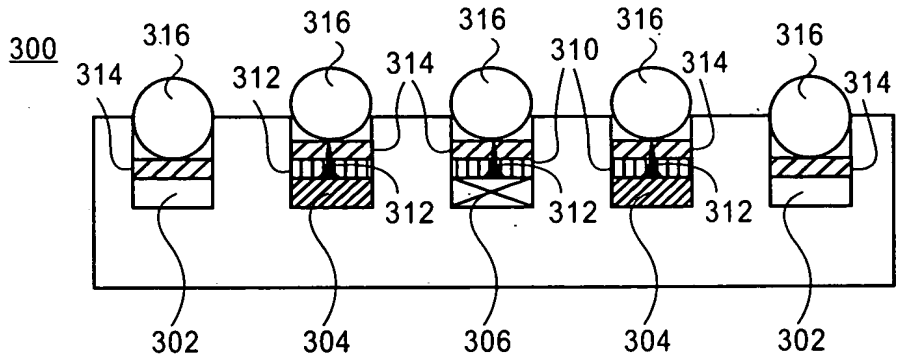

FIG. 4F

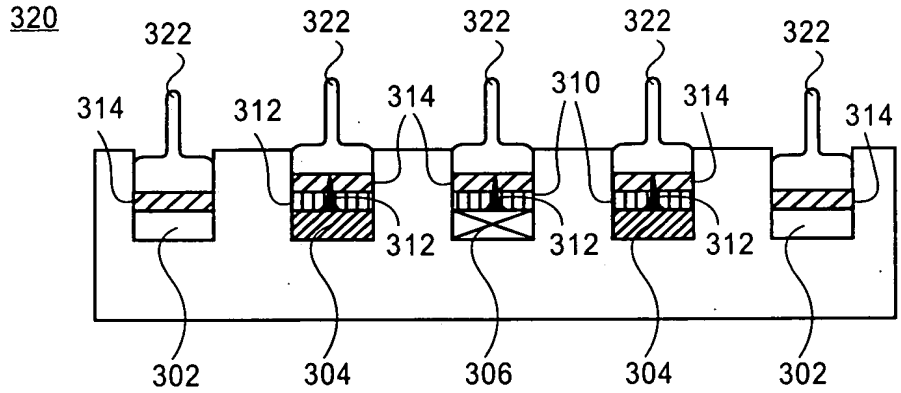

FIG. 4G

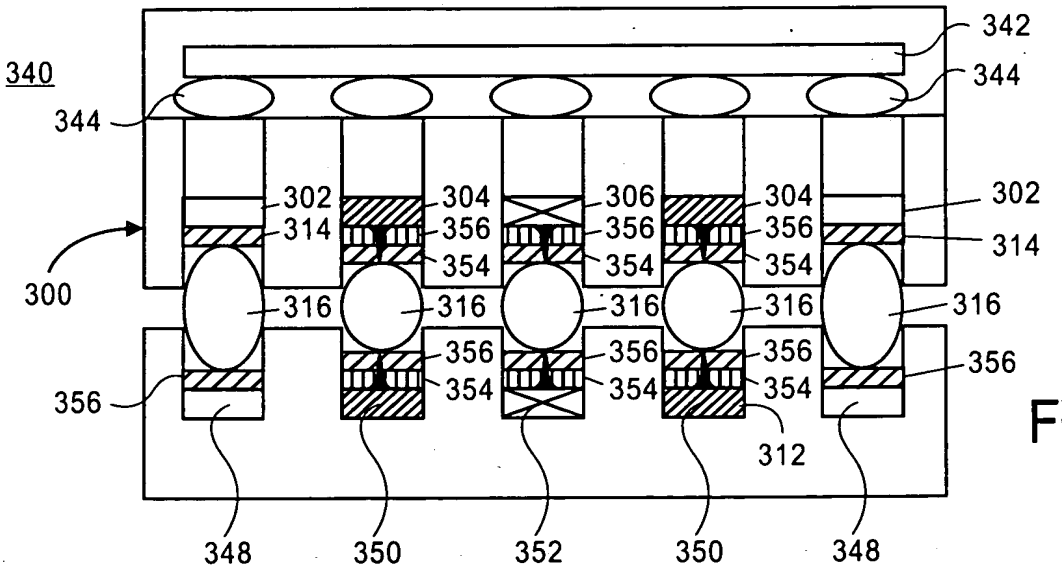

FIG. 4H

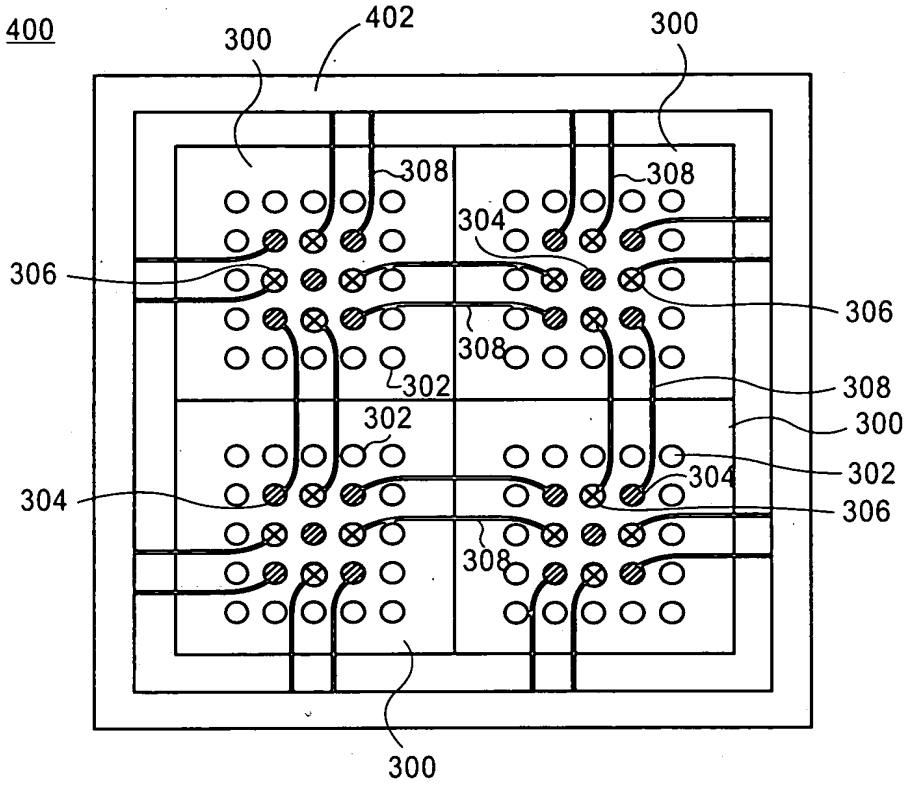
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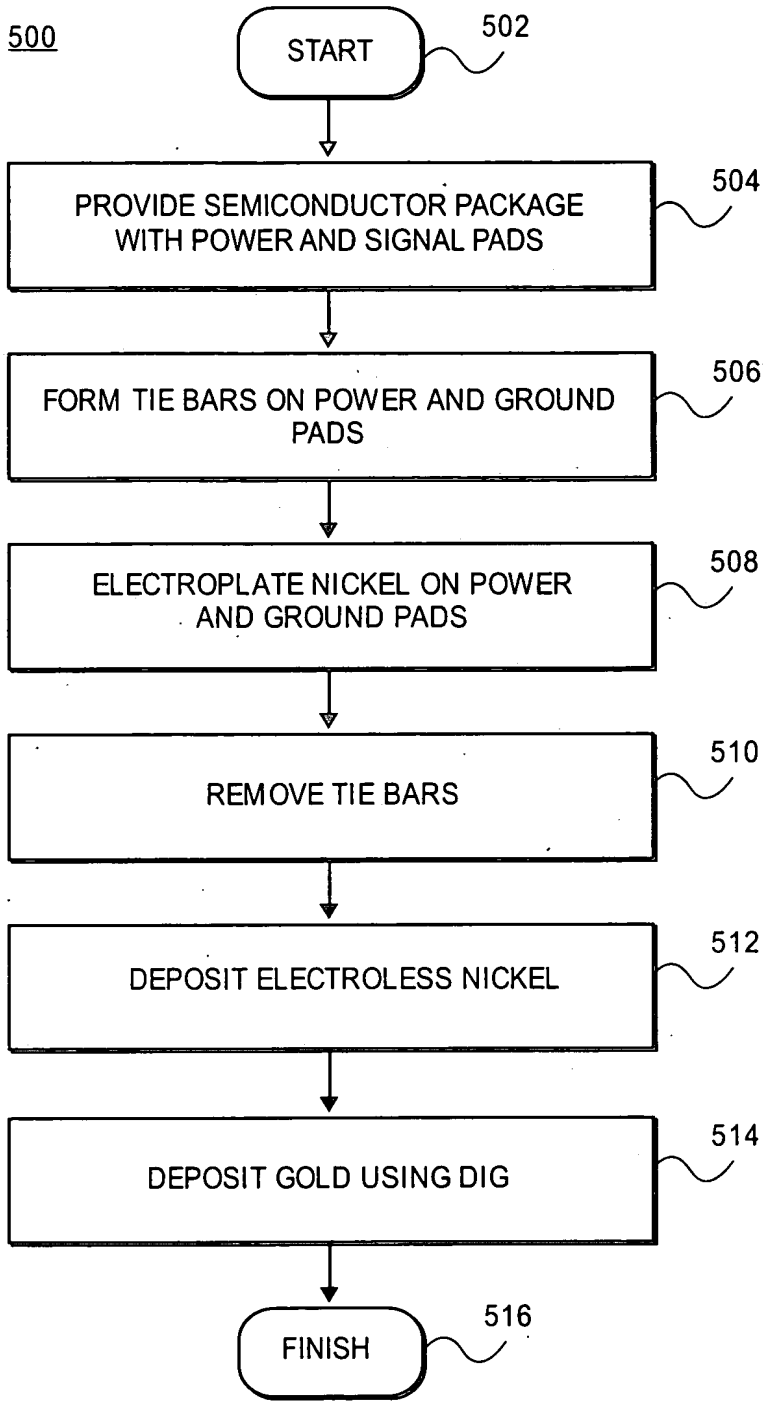
FIG. 5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START
502
PROVIDE SEMICONDUCTOR PACKAGE WITH POWER AND SIGNAL PADS
504
FORM TIE BARS ON POWER AND GROUND PADS
506
ELECTROPLATE NICKEL ON POWER AND GROUND PADS
508
REMOVE TIE BARS
510
DEPOSIT ELECTROLESS NICKEL
512
DEPOSIT GOLD USING DIG
514
FINISH
516

FIG. 6

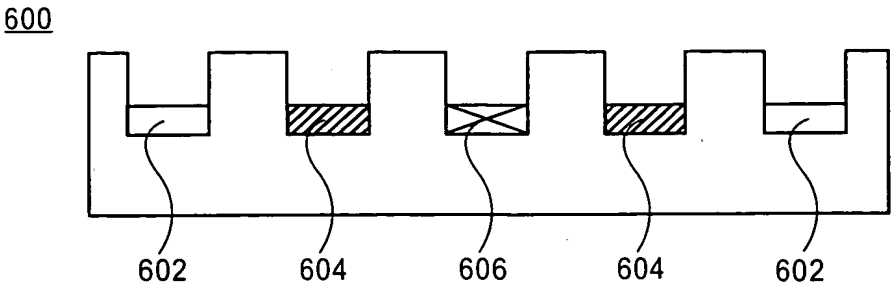

FIG. 7A

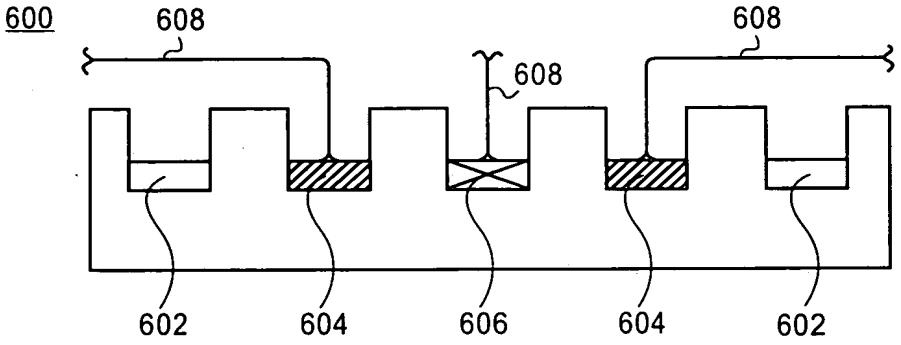

FIG. 7B

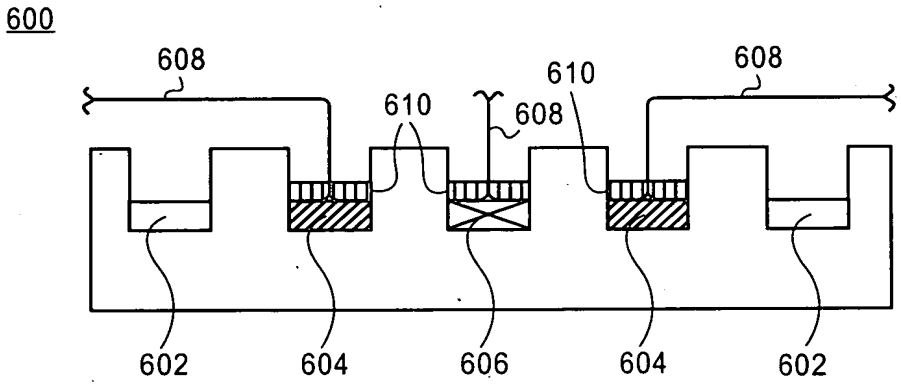

FIG. 7C

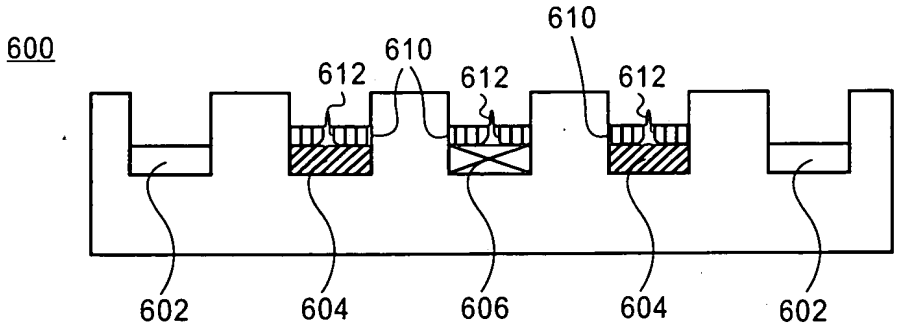

FIG. 7D

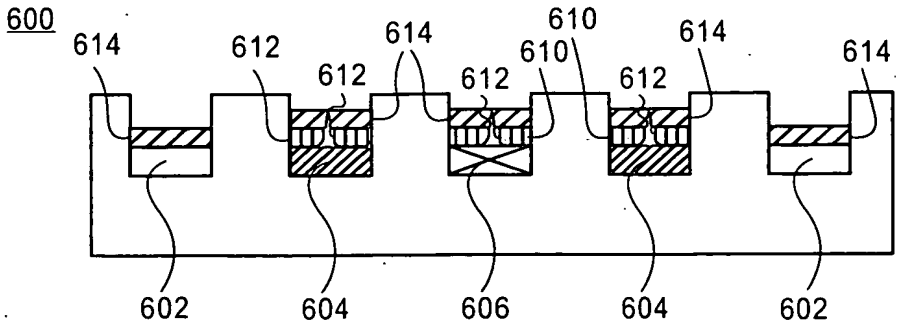

FIG. 7E

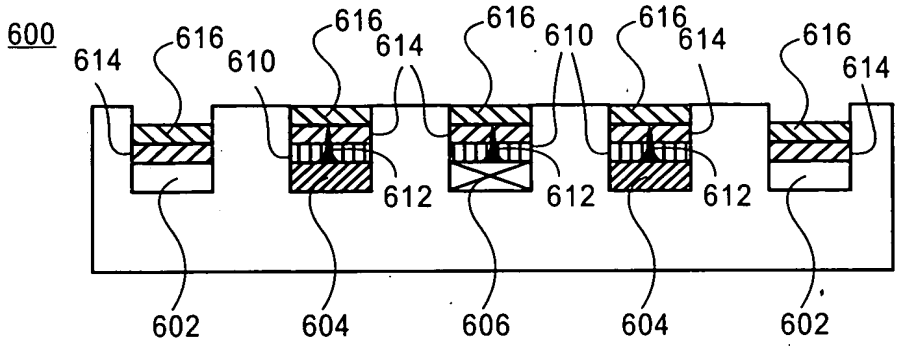
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FIG. 7F

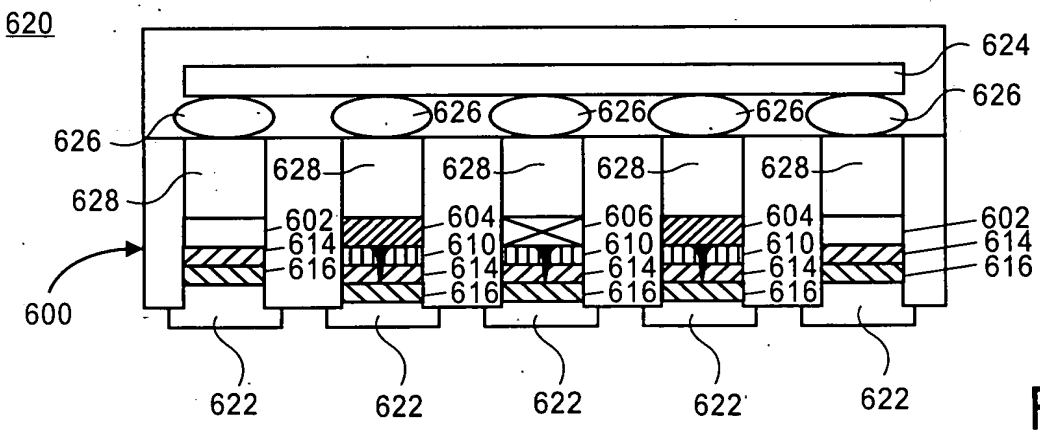
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FIG. 7G